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ABSTRACT

This paper examines the interrelationship between children's acquisition and use of symbols and the development of imaginative play. The paper focuses on the use of pretend play as an expression of the child's capacity for symbolic functioning and as an index of intellectual development. The first section of the paper reviews developmental changes in children's play behaviors from infancy through the preschool years. Observational and experimental studies of children's play and the concomitant use of symbols during this period are presented and discussed. The second section of the paper discusses some of the theoretical issues and controversies involved in the interpretation of pretend play. This section describes and compares functional and structural approaches to the study of play behaviors. In the final section of the paper, the recent research demonstrating and defining the cognitive developmental value of play is portrayed as a beginning response to past criticisms of play oriented early childhood education programs. (BD)

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PLAY AND THE ACQUISITION OF SYMBOLS

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The Merrill-Palmer Institute

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Between the years of one and three, a profound change occurs in the play of human children. Prior to this period, the baby sleeps when tired and eats when hungry; objects are banged, waved, pushed; a spoon might be put into a cup, a top on a jar but even these gestures of relatedness are brief and tentative. Then, quite suddenly a new element appears. Piaget's classical observation vividly illustrates the nature of this new element:

> OBS. 64... In the case of J.,...the true ludic symbol with every appearance of "make-believe" first appeared at 1;3 (12) in the following circumstances. She saw a cloth whose fringed edges vaguely recalled those of her pillow; she seized it, held a fold of it in her right hand, sucked the thumb of the same hand and lay down on her side laughing hard. She kept her eyes open, but blinked from time to time as if she were alluding to closed eyes. Finally, laughing more and more, she cried "nene" (nono). The same cloth started the same game on the following days. At 1;3 (13) she treated the collar of her mother's coat in the same way. At 1;3 (30) it was the tail of her rubber donkey which represented the pillow! And from 1;5 onwards she made her animals, a bean and a plush dog also do "nono" (Piaget, 1945, from the 1962 edition, pp. 96-97).

Piaget's interpretation of this behavior is also worth noting:

> As for symbols, they appear towards the end of the first year ... For the habit of repeating a given gesture ritually gradually leads to the consciousness of "pretending". The ritual of

> going to bed...is sooner or later utilized "in the void," and the smile of the child as it shuts its eyes in carrying out this rite is enough to show that it is perfectly conscious of "pretending" to go to sleep (Piaget, 1932, from the 1965 edition, p. 32).

The purpose of the present discussion is to examine children's play the acquisition of symbols and the relation between them. Play, of course, is a generic term that designates an awesome array of different behavior patterns: the sports and games of older children, the pretend activities of early childhood and the sensorimotor manipulations of infancy. There is considerable controversy about the meaning of the term, whether it can be used profitably to label common elements of widely varying behavior or to mark a distinctive consequential psychological process. The term will be used here in a more restricted sense to refer to activities that have an "as if" element in the judgement of an adult observer. There are a great many unresolved issues regarding the basis of such adult judgements and these will be discussed later. For the time being, let me simply note that observers identify pretend episodes easily and reliably; the "as if" element seems to announce itself and most adults, regardless of their previous training or experience with young children, have little difficulty reading the message.

The development of pretend play is of interest as an expression of the child's capacity for symbolic functioning and this capacity in turn is viewed here as a major intellectual accomplishment. A symbol is something which stands for or designates something else by reason of relationship, association or convention. To most of us, symbols designate things in the real world or properties of these things - particular,

physical, touchable things, categories of things, or concepts of the qualities and relationships linking things. A symbol may be a word, a picture, a gesture, an object or combinations of these; the word "lion" designates a kind of animal, both picture and word designate courage, and the moving sound picture of a growling lion designates a motion picture company. The relation between symbols and what they designate is more or less arbitrary and more or less regularized by social convention - the sound pattern of the word "lion" suggests little of the animal, but the lion is more appropriate than the weasel as a symbol of courage, and the lion as logo is chosen deliberately to evoke a cluster of positive associations. A symbol may be intensely personal and have meaning primarily for the person who constructed it; or, a symbol may be public, a socially agreed upon representation of shared information. Whether personal or public, symbols represent information in a condensed, compact form. But underlying the construction and use of symbols is the person's recognition of a surrogate relationship between the symbol and that which it represents. The word "lion" stands for what a person knows about the animal; when used, the word can designate what is known or label a given instance. Piaget and others (cf Furth, 1969) make a distinction between a symbol and its signification, i.e. the structure of meaning designated by the symbol. Symbols are mental constructions; an efficient tool for coding and communicating meaning. The symbolic function (or, more accurately, the semiotic function) refers to the capacity to separate meanings and real world events from coding vehicles such as words, images, sounds and gestures that represent those meanings and designate those events (Piaget, 1962; Werner and Kaplan, 1963; Vygotsky, 1967). Although language is a striking expression of the capacity to construct and use

a symbol system, the capacity appears as well in non-linguistic - graphic, musical or gestural media (Wolf and Gardner, 1977).

In examining the development of pretend play, we will stress the child's growing understanding of symbols as expressions of what is known, as mental constructions that provide a way of representing and commenting on experiences that is different from the experiences themselves. First, we will review the changing forms of pretend play in early childhood, touching upon the observational and experimental research that illuminates its structure. Then we will examine theoretical issues and controversies concerned with the interpretation of pretend phenomena. Finally, we will examine evidence that pretend play influences development and the possibility that the exercise and use of symbols contributes to the development of adaptive behavior.

The Changing Structure of Pretend Play

According to Piaget, the first 5 stages of sensorimotor development reflect changes in the baby's tendency to repeat and vary activities, to attend to external rather than bodily events, to separate means (actions) from ends (outcomes). During the first year of life, the infant acquires the concept of the permanent object which, according to Piaget, is the realization that there are categories of external events which are independent of the baby's perceptual or motoric acts. Stage 6 in Piaget's model marks the beginning of representational thought, i.e. the capacity to construct mental elements that stand for raw perceptions and actions and the capacity to manipulate these elements according to coherent and fundamental logical principles. In the Piagetian framework, the onset of pretend play coincides with other milestones of cognitive development and so warrants detailed attention. Although other investigators have

noted the early beginnings of pretend activities (Valentine, 1937) and although the implications of these activities have attracted considerable theoretical discussion (cf Stern, 1924; K. Buhler, 1930), it was Piaget who first provided a detailed documentation of the developmental sequence of pretend activities.

Precursors. The precursors of pretend play appear during the fifth stage of sensorimotor development. The child indicates an understanding of object use or object relations by brief gestures of recognition; the child touches a comb to his hair, a spoon to his mouth, puts a spoon in a bowl, a top on a jar or rubs a pencil along a surface.

In an illuminating study, several of Piaget's colleagues (Sinclair 1970; cf Inhelder, Lezine, Sinclair and Stambak, 1972 for details) examined changes in the form of spontaneous play behavior between 12 and 26 months of age. The observed behavior was coded into three categories suggested by distinctions which have an important place in Piagetian theory. The first category included activities with a single object used according to its physical characteristics - its softness, smoothness, heaviness, weight, noisiness or pliability. The second category included activities that organize an array of objects by forming a spatial or functional arrangement (grouping objects together, or next to one another, putting a spoon in a cup and so forth). The third category included make-believe activities (feeding the doll, putting a toy animal to sleep). The results suggest a sequence of developmental transitions such that simple one-object behaviors decline between 12 and 26 months, amd combinatorial arrangements increase eventually to the point where they reflect the child's use of a classificatory principle (cups in one group, spoons in another). Pretend activities first appeared at 16 months and became

increasingly elaborated thereafter. A recent study of children between the ages of 7 and 20 months confirm these age trends (Fenson, Kagan, Kearsley & Zelazo, 1976). Almost all of the 9 month olds engaged in simple two-object acts (touching a spoon to the base of a pot) but relatively few 7 month olds did so. All of the 13 month olds formed simple accommodative (functional) relations (spoon in cup), but only a third of the 9 month olds did so. Symbolic acts (pretending to eat or drink) were performed rarely at 9 months, more frequently at 13 months, and by all of the children by 20 months. The data imply a distinct developmental sequence in which the spatial elements of a relationship and perhaps the coordinations necessary to produce it (e.g. spoon in cup) must be well mastered before a symbolic representation of the actual social function of that arrangement (stirring and eating) can be produced.

Early forms. Pretend play first appears as fleeting gestures. The child produces the motions of sleeping without intending to sleep or the motions of eating without intending to eat. These activities seem to take place outside their customary context and seem divorced from their customary functions of rest and nourishment.

Then, over the next year and a half, these ephemeral gestures become elaborated and enriched. At first a doll is simply an object to be touched, moved, banged. Somewhat later, the doll (rather than the child) is used as the recipient of food and eventually is made the recipient of a complex array of caregiving activities — it is put to bed, dressed, patted and spanked (Piaget, 1962; Nicholich, 1977; Fein and Apfel, in press). The child's voice quality might change to sound like a parent; gestures, clothing, and other elements might combine to indicate that a role enactment is occurring (Sachs and Devin, 1976; Garvey and Brendt, 1975).

At first, the objects used in pretense tend to be similar to the things used in the real life situations that pretend activities mimic (baby-like

dolls, cup-like cups). Gradually, the need for verisimilitude weakens and assorted objects (sticks and shells) can be used as substitutes in pretend enactments (Piaget, 1962; Vygotsky, 1967, Fein, 1975). Eventually, the child can create the semblance of an object (cupped hand; molded clay) or use pantomime gestures in the absence of a physical entity (hand holding absent cup or arms rocking absent doll). Piaget (1962) cast these empirical observations into a sequence of developmental levels recently replicated by Nicholich (1977). As summarized in Table 1, the developmental sequence proposed by Piaget notes the appearance of new components that become coordinated into increasingly elaborate and flexible representational behaviors.

Put Table 1 about here

Sociodramatic Play. Initially, pretend play is a solo activity. Adults may participate and organize it, but children under three years of age rarely share pretend sequences with one another except, perhaps, in brief, imitative, parallel exchanges. By two-and-a-half years of age, the beginnings of sociodramatic play appears and, by the age of five years, what began as a few simple gestures begins to encompass intricate systems of reciprocal roles, ingenious improvisations of materials, increasingly coherent themes and weaving plots. Consider the following episode of sociodramatic play:

> ...Karen began to push the carriage. Harvey said, "Let me be the baby, Karen," and started to talk like a baby. He got into the carriage. Karen pushed him around the room as he squinted his eyes and cried. She stopped the carriage, patted his shoulder, saying, "Don't cry, baby." He squirmed around, put his thumb in his mouth, and swayed his body.
>
> Josie came to the carriage and wanted to push Harvey. He

jumped out and hit her in the face. She walked away almost crying. he went to her, put his arm around her and said, in a sympathetic manner, "Come, you be the baby, I'll push you in the carriage." She climbed in. He ran and got the dog and gave it to her saying "here, baby." She smiled and began to play with the dog. He...got a cup and held it to her mouth. He smacked his lips, looking at her, smiling. He pushed her around in the carriage. Karen ran to him and said "Harvey, let me push the carriage, I'll be the mamma, you be the daddy." Harvey said "O.K.," and reached his hand in his pocket and gave her money. He said "Bye, baby," waving his hand. He went to the shelf, took a hammer and a bed, then sat on the floor and vigorously nailed spokes in it. Karen...said, "What are you doing, Harvey? He said, "I'm making a bed." He looked at Josie and smiled (Hartley, Frank, & Goldensen, 1952, pp. 70-72.

The episode contains several characteristics typical of most sociodramatic sequences. Some of these appear in earlier forms - decontextualization, the shift from self-related to other-related activities, object substitutions, role enactments. Others are new. First, the symbolism is collective; the theme, the definitions of roles and role relationships, and the meaning of gestures and substituted objects are shared. Second, the children use signals to announce the onset of a pretend sequence and they talk about pretending. By three years of age, collective symbolism is deliberately managed through a variety of verbal and non-verbal communications (Garvey and Berndt, 1975).

Components of Pretending. The development of pretend play reveals the phasing in and coordination of several discrete strands of mastery that seem to reflect the growth of the symbolic function. Some strands have attracted more attention than others but each constitutes an issue in the analysis of symbolic processes. These strands are depicted in Figure

1. In the figure we have attempted to indicate transitions from situation transformations to a purely imaginary self, companion and thing (Manosevitz, Prentice and Wilson, 1973).

Put Figure 1 about here

1. Decontextualization: Situation Transformations

In the earliest appearing form of pretend play, the child's behavior becomes detached from the real life situation in which it ordinarily occurs (mealtime, bedtime) and the motivational underpinnings ordinarily associated with it (hunger, fatigue). In a sense, a familiar behavior is reframed and placed under voluntary control free of specific situational and motivational demands. It is curious that this early period of pretending coincides with the ritualization of routines in real life (Gesell, 1925) as if some degree of stable patterning were required either as prerequisite or contrast.

Piaget claims that the child is consciously aware of having decontextualized the behavior, a claim difficult to confirm since the knowing smile does not always occur. And yet, by three years of age the intention to pretend is communicated clearly from one child to another with words, gestures and other communicative acts. Meta-communicative signals that say "this is play" are produced by infrahuman primates as well as children (Blurton Jones, 1972) and serve to mark a situation with boundaries and rules that others understand (Bateson, 1956). It was Bateson (1955) who first noted that people bracket life situations into "frames" that may be viewed as definitions of situations "built up in accordance with principles of organization which govern events and our subjective involvement in them (Goffman, 1974, p. 10.)" Human children seem able

to organize a general play frame into subframes so that a play episode might be initiated by a general invitational announcement "You're going to play with me 'cause I'm your friend, I gaveyou peanuts," which is accepted in the response, "Shall we play house?" The subframe might be organized by role assignments "You be the mommy and Teddy and we will be the babies," whereupon one of the players enters the frame with a first move "You must have your supper now" which leads to a fitting in-frame response "I don't want any supper now."

Once begun, the episode might shift from pretend play to non-pretend play as the child, still in a play frame orchestrates a variation within the sub frame, e.g. "You're supposed to call me on the phone now." And if children are uncertain about the play mode of a partner, they check it out (Garvey, 1974, p. 170):

Child X: I've got to go to the potty (he is sitting on a 3-legged stool with a magnifying glass in its center).

Child Y: Really? (he turns to look)

Child X: No, pretend (he grins).

Child Y: (Smiles and watches child X).

The preceding examples illustrate two ways in which the symbolic aspects of play are manipulated by children when a pretend sequence is initiated. One way is ideational: the initiation depends on ideas of things not actually present in the immediate environment (Shall we play house? You be the mommy....). Another way is material; the initiation depends on an actually present object (the stool referred to as a potty). In a recent study, Mathews (1977) compared these modes of initiation in four-year-old children. Approximately half the initiations were ideational.

Clearly, these children act as if they have mastered a definition of pretend play as a rule governed situation distinctly different from real life but yet related in some way to it. By 5 years of age, children can talk about their mastery as well as act it out. Although the results are preliminary, we have been asking children to discuss the differences between work and play, what they play and how they play. Our informants note without exception that work is what people "have to" do, and play is what people chose to do when they can do what they want to do. Pretend play is the form of play most frequently mentioned by these children and they have little difficulty describing how they play house, doctor, fireman or monster.

Of course, exactly when the child becomes aware of the relation between pretense and reality and becomes able to deliberately manipulate the transition is not clear. Piaget makes a distinction between awareness which occurs with the first auto-symbolic schemes and planning which appears later. But why familiar activities become decontextualized in the first place is not clear except as an incidental fallout from general changes in the organization of sensorimotor activities, namely the separation of means from ends.

2. Object Substitutions

During the early stages of pretend play, an object must be present in its familiar form if it is to be used as an object in pretense. Initially, the spoon must be "spoonlike", but eventually an object which does not appear to have any apparent spoonlike features (a leaf) can be used as if it were a spoon provided it can be held, lifted and brought some fashion to the child's mouth. As development progresses, the dependency

of pretending upon a perceivable object of any fort is reduced and eventually the child is able to produce a purely imaginative object with no apparent reliance upon the immediate stimulus field (Overton and Jackson, 1973).

Piaget (1962) views the substitution phenomena as a significant component of symbolic development but also as a reflection of the essentially autistic orientation of the child. The symbols created are personal, private and perhaps even accidental. By contrast, Vygotsky (1967) views the phenomena as an essential step in the separation of thought from objects and actions. In discussing the example of a child using a stick to ride on as if it were a horse, Vygotsky argues

> "Play is a transitional stage...At that critical moment when a stick - i.e. an object - becomes a pivot for severing the meaning of horse from a real horse, one of the basic psychological structures determining the child's relationship to reality is altered... To a certain extent, meaning is emancipated from the object with which it had been directly fused before (Vygotsky, 1967, pp. 12-13.)"

The issue of object substitutions was examined in a study by Fein (1975) and in another by Fein, Robertson and Diamond (1975). In the former study, it was argued that by two years of age, the child who feeds a horse-like toy horse with a cup-like cup knows that real animals eat and that a cup is for drinking. Pretense is operating insofar as the child behaves as if he were attributing living functions to an inanimate object, adding liquid to an empty cup and, importantly, establishing the relation between horse and cup. In a sense, neither the horse-like horse (a toy) nor the cup (empty) are "real" but when realistic, prototypical objects are used the child pretends to "feed the horse" with little difficulty. The scheme developed to describe these relationships is illustrated in Figure 1.

Three types of transformations are represented: (a) the shift from self to other (the child who is usually fed by another becomes the one who feeds), (b) the transformation of an inanimate object into an animate one (horse shape into horse) and (c) the transformation of one inanimate object into another (a shell into a cup.) In the above example, the relation "feeding/eating" requires more transformations as the "horse" and the "cup" become less horse-like or cup-like. Now suppose pretending in young children depends on the number of transformations necessary to produce a relation (such as "horse eats from cup"). The hypothesis is that pretending in young children will vary as a function of the number of substitutions required of them. Two of the relationships diagrammed in Figure 1 are open to experimental manipulation: a less prototypical cup (or horse) can be substituted for a highly prototypical one. Substitutions can occur singly or jointly.

When two-year olds were asked to "feed the horse" under double, single or no substitution conditions, the results were in accord with predictions derived from a transformational analysis. Over 90 percent of the children were able to enact the pretense when no substitutions were involved, 70 percent could do so when single substitutions were involved, and only 33 percent could do so when a double substitution was involved. In Vygotsky's terms, the children required a pivot, a more or less realistic anchor, to support a symbolic transformation. The symbolic function is operating, but symbols and symbol making is not completely emancipated from perceivable objects.

Additional evidence comes from a study reported by Fein, Robertson and Diamond (1975). In a free play situation, children who were 20

and 26 months old were presented two toy sets - a highly prototypical set with realistic dolls, trucks and other toys and a less prototypical set with less realistic toys. Toys in the latter set were scaled according to their degree of realisticness. Results indicated that within the less prototypical set, the pretend use of objects increased as the objects became more realistic and the use of less realistic materials increased with age.

The purpose of the above studies was to examine the type of symbolic competence required of the child if pretend play is to occur. For the young child, nonrealistic materials place cognitive demands the child is unable to meet. For the older preschool child, the child who has reached the golden age of make-believe play, the relationship may be reversed. According to studies reported by Phillips (1945) and Pulaski (1973), a greater variety of fantasy themes are evoked by nonrealistic than realistic toys. But even at this age there are limits to the child's substitution of one thing for another (Elder, in press). For example, when children were offered a number of substitution alternatives for food to feed the "hungry baby", children tended to reject incongruous alternatives such as a toy animal and a hair brush (Golomb 1977).

3. Self-Other Transformations.

The third strand appearing in the development of pretending concerns how the child as "self" participates in a pretend sequence. Initially, the child's pretend activities are self-related in that the child functions as both agent and recipient (e.g. the child feeds himself). In time, other actors and agents are added to the pretend

game and persons as well as things become substitutable (e.g. the child pretends to feed mother or a doll). Eventually, the child becomes a detached generalized "other" who makes the doll feed itself or a parent doll feed a family of dolls.

In one study, Fein and Apfel (in press) examined how the structure of object-action relationships changed between 12 and 30 months. The children were presented a set of realistic play materials, which were either actual eating utensils (cup, spoon, bottle, pot), or toys (doll, doll-bottle, toy tea cup). The question was how pretend feeding changed with respect to who was fed (child or doll) with what utensils. One of the major findings was that the 12 month olds, all of whom had been bottle-fed, rarely used the bottle to feed themselves but preferred the spoon and the cup. The doll was ignored until 18 months and then it was fed with the bottle rather than the other utensils. The results help to make two points: first, even at 12 months, the child's choices do not seem to be haphazard. Pretence seems to be a selective and deliberate activity. Second, the results pose a question with respect to the function of pretense. At 12 months, the children avoided a familiar object, the bottle. On the other hand, they ignored the doll, as if the equation "doll=baby" has yet to be formed. Rather, they initiate a familiar activity (eating or drinking) with objects they were just beginning to use in real life, objects which pose a serious challenge when filled with real liquid or food. The structure of early pretend behavior thus suggests a possible function. Pretense might provide special opportunities for the partially understood and the dimly grasped to become more firmly mastered. Vygotsky (1967) stated the case quite clearly "...play creates the zone of proximal development...In play a child is always above his average age, above his daily behavior."

Using a modeling technique to facilitate pretend play, Watson and Fischer (1977) studied the way infants make objects act as agents between the ages of 14 and 24 months. These investigators proposed four steps in the developmental sequence. First, the infant uses self as agent (e.g. puts his head on a pillow to pretend to go to sleep). At the next step, the infant uses a passive "other" as agent (puts a doll to sleep), and at the third step, a substitute object (a block) can be used in place of the doll. Finally, at the fourth step, the infant makes the doll an active agent and puts the doll to sleep as if the doll were actually carrying out the action.

These findings raise another issue in the analysis of symbolic development. Several theorists agree that in early development, actions and objects are psychologically undifferentiated from one another (Werner and Kaplan, 1963; Vygotsky, 1967). But Werner and Kaplan add another element, the person, and characterize the early understanding of the child as consisting of "ego-bound things-of-action." According to these theorists, the development of symbolization involves a progressive distancing of first, person from referent and second, symbol from referent. With development, the child comes to understand the world as made up of "ego-distant objects-of contemplation." The third strand in the development of symbolic play traces changes in the role of the child in pretend episodes. As the child comes to symbolize others as agents, he becomes able to symbolize himself as a different "other" and finally achieves sufficient psychological distance to permit what Vygotsky (1967:14) refers to as a "dual affective plan" in which the "child weeps in play as a patient but revels as a player."

4. Symbol Socialization: Collective Transformations

The fourth strand in the development of pretend play represents the

socialization of symbols. In the early stages, representations and substitutions may be highly personal and idiosyncratic, though not entirely haphazard (Fein and Apfel, in press; Golomb, 1977). In sociodramatic play, a stick can be food, a child a baby, and a scene represent mealtime only if the players understand the substitutions, roles and themes and negotiate the arrangements. In spite of the novelty, originality and inventiveness of sociodramatic play, there is often a high degree of standardization in the way role-appropriate actions and objects are defined - babies drink from bottles, cry and curl up; adults drink from cups, talk on telephones, make dinner, and wheel baby carriages (Lowe, 1975). The earliest appearing roles are those of child and adult and these roles are designated by a relatively small number of objects and gestures. A baby is invariably bottle-fed and the adult is invariably cup-fed; babies sleep and adults are wakeful; babies are the passive recipients of adult initiated actions. The standardization of seemingly core role characteristics begins to appear by two years of age (Fein and Apfel, in press) when primitive feeding routines begin to evolve into more elaborate caregiving sequences. It is as if some stabilization of the way reality is to be construed and represented is a prerequisite for new variations and collective pretend enterprises. In this sense, pretend play becomes "rule-governed" and socialized.

Little is known about the early beginnings of sociodramatic play. Typically, sociodramatic play is studied in preschool children whereas other forms of play are studied in infants who have few opportunities for sustained group activities. In a currently ongoing study we are beginning to study the development of sociodramatic play in children who enter a group care arrangement during the second year of life.

In the study, we are observing the children in the classroom, and in groups of two a laboratory playroom where their behavior is videotaped. It is becoming evident that sociodramatic play rarely occurs before 30 months of age, and even when initiated, it falls flat. Consider the following observation of a relatively advanced exchange between two 2 year olds:

> Amy finds a lady's hat. She puts it on and then goes over to the mirror. Looking in the mirror she adjusts the hat smiling at herself as she does so. She returns to the shelf of dress up clothes and selects a purse. She opens it, looks inside, choses it several times. She ten picks out a pair of high heel shoes and puts them on. She turns to a caregiver announting "I'm going to the store" and marches across the room. Halfway across, she notices Judy who is playing a running game with a caregiver and pauses to watch. She then returns to the dress up corner, selects another purse and brings it over to Judy. She offers the purse to Judy, who glancing at Amy's outfit, accepts the purse. Amy takes Judy's hand and together, holding hands, they walk across the room, smiling at one another. Judy abruptly stops, looks back to the site of her previous activity. Without comment she lets go of Amy's hand, drops the purse and returns to the game. Amy watches her depart, and returns to the house corner.

Later in the observation, Amy turns to a doll and begins an elaborate sequence of caregiving, dressing up, going out and so forth. In other observations, Amy has been observed using dolls and dress-up clothes

in pretend sequences although the sequences are less elaborate and sustained. What is it, then, that stands in the way of group play?

One possibility concerns the distance between self and other. It may be that the young child can only construct symbolic representations of distinctively different, well-differentiated, familiar, but puzzling "others" - adults who are perceived as "out there", separate, independent and autonomous objects. The young child may still be too close to himself to represent an "other" that is like the self. At the same time, the child can attribute babyness to a doll and appropriately render an adult role in relation to the doll. If so, sociodramatic play between two year olds cannot get started for lack of suitable role partners able to maintain the reciprocal relation of parent-child. Since the earliest pretend themes revolve around child care and family relations, age associated roles are of central importance.

Another possibility concerns the motivation of pretense. If, as Vygotsky (1967:7) claims, "Play is invented at the point where unrealizable tendencies appear in development," the difficulty may not be one of self-other differentiation as much as one of challenge or mastery motivation (White, 1959). Just as the 12 month old avoids pretending to drink out of a bottle, so the child a year later may refuse to assume a role s(he) knows too well. The child can represent and adopt the role of baby but (s)he has no interest whatsoever in doing so. A baby is simply too well understood and the symbols are too well-formed. Within the framework of mastery motivation, the content of pretense is likely to reflect matters that the child partially understands and wishes to understand better.

Finally, the child's notion of pretend play as a situation "frame", or transformational "set" (Bateson, 1955; Sutton-Smith, 1972) may not have become sufficiently formed. If so, a necessary requirement for a pretend theme to be shared has not been satisfied and the meta-communicative messages about that theme cannot be produced and understood (Garvey and Brendt, 1975). Children may simply have not grasped the notion that pretend play can be a social endeavor with shared rules about the production and communication of symbolic representations.

Some of these possibilities are amenable to more systematic study. Suppose Amy or Judy were to play with a more skilled sociodramatic player? Would they play the role of baby and if so would the role be sustained through various thematic variations. Would they be able to reverse roles and would they respond to meta-communicative messages? Or, suppose an effort were made to train two year olds in sociodramatic play? How effective would such training be? What would be acquired and how lasting would the acquisition be?

Theoretical Perspectives

In the previous section, we described the changing forms of pretend play in late infancy and early childhood. Of course, the description was not theoretically neutral. Information about the development of pretense comes largely from the work of investigators concerned with the sequence of changes in the patterning a form of behavior over relatively long periods of time. These investigators focus their attention on the structure and development of behavior, the nature of the child's achievement from its earliest to most mature expression. Another group of investigators bring a strikingly different perspective to the study of pretend play. These investigators tend to focus on the frequency rather than the form of the behavior and the conditions that govern relatively short term changes in the frequency of occurence. The symbolic character of pretense has been a central issue for the first group and an afterthought for the second. By contrast, the motivation of play is of casual interest to the first group, and of primary concern to the second. Each perspective independently contributes to an understanding of the phenomenon, but as yet there has been no attempt to conceptualize a common framework within which both might operate.

Structural - Developmental Issues

Structural—developmental theorists see the "as if" characteristic of pretend play as its defining characteristic. Accordingly, the form is defined as the representation of actual or imagined experience through the separate or combined use of objects, motions, or language under circumstances different from those in which the actual experiences are

likely to occur (see Wolf and Gardner, 1976 for an alternative definition). The central issue for these theorists is the relation between pretense and the child's ability to construct and use symbols. Wolf and Gardner (1976) state two aspects of this issue in linguistic terms:

> The central achievement is 2-fold, requiring both the construction of an adequate vocabulary of signifiers for a wide range of contents, and the invention of a "grammar" which permits the individual signifiers to be combined into more complex statements...In symbolic play, the fundamental process of signification (the decision about how aspects of experience...shall be rendered) is up to the symbolizer (Wolf and Gardner, 1976:3).

Two central variables in the development of symbolic play are changes in the vocabulary and grammar of the signifiers. During the early stages of pretense, the child has a limited vocabulary (a few gestures represent a small number of themes) and pretend episodes represent single elements. The child's pretend vocabulary grows during the second year of life and several elements are combined to produce elaborated themes.

But there are two other aspects of the achievement and these can be stated in sociolinguistic terms. For one thing, the child constructs a self-other system that govern the formulation of statements designating personal and interpersonal positions; in a sense, the child becomes able to speak as either himself, a particular "other", or a generalized other and so represent a network of roles and identities. In addition, the child acquires a way of socially negotiating decisions about how aspects of experience are to be rendered. As we described earlier, the child

comes to understand that pretense can be talked about or in other ways communicated and so acquires a set of meta-communicative strategies for sending and receiving the messages needed for these negotiations.

Awareness and Intentionality. The problem of awareness, the ability to distinguish play from non-play, real from pretense is an old one. Most symbolic behaviors appear at a given age and tend to change in complexity and function until they reach a level of stabilization. By contrast, pretend play shows an inverted U-shaped function: it appears at 12 months of age, blossoms between 5 and 6 years, and then begins to decline. Although the particular age of the decline is controversial (Eiferman, 1971), the shape of the curve is not. If pretend play is a sign of the child's sophistication, why does it disappear? William Stern (1924) and Karl Buhler (1930) debated this question and Stern proposed the "ignorance" hypothesis. According to Stern, the 12 month old who "drinks" from an empty cup knows something about the world, but not very much. The child has only "hazy memories and echoes" and poorly formed notions about things that are cups and things that are not cups. When the child at 24 months treats a wooden stick as if it were a doll, the child believes, at that moment, that the stick is a doll. By six years of age, when pretend play begins to decline, the child knows a great deal about the fixedness of role relations, objects and boundaries in the real world. Stern implied that the child knows enough by then so that his behavior can be governed by a healthy respect for reality. Buhler's succinct response to Stern's argument was in the form of a penetrating question: If the stick cried would the child be surprised?

Later theorists expanded these earlier discussions. Piaget

(1962) offered a position similar to Stern's in its reference to the child's ignorance, but different in that it stressed intentiality as well as awareness. Before the age of 12 months the child has not acquired an adequate system for representing objects and object relations. As long as the meaning of objects is governed by sensorimotor knowledge, the child cannot go beyond behaving in accord with the immediate, concrete situation. As the child acquires a mental system to represent objects and object relations, he can ignore things as they are by assimilating the here and now to well-formed mental categories. The child is fully aware of the difference between a full cup and an empty one, between a cup and a non-cup. When a pretense happens, the child knows it. During subsequent stages in the development of pretense, the child knows before it happens; of course, intention is a prerequisite for collective pretense. According to Piaget, pretense is a transitory phase in mental development (Piaget, 1966; Sutton-Smith, 1966). Eventually, logical structures dominate earlier prelogical forms and pretense is supplanted by constructive activities and games with rules. However, the child's prelogical status does not preclude the acquisition of symbolic forms (language, images) to represent the object and action knowledge previously acquired (cf discussions of the figural and operative aspects of thinking in Piaget, 1966; Furth, 1969; Piaget and Inhelder, 1971). The form reflected in symbolic play is distinct from language in that the symbols are not arbitrary. It is distinct from images in that it is not derived from perceptions. Play symbols have a special status because they are derived from imitation and indicate that the child is coming to grips with the configural

properties of situations. In Piaget's view, the child's memories are clear enough, but he is simply not bound by a system of logical operations. Thought and symbols are still embedded in objects and actions. As far as the child is concerned, eating from an empty spoon could produce food, drinking from an empty cup could produce milk, and the stick could cry.

Vygotsky (1967) contributed a middle-of-the-road position to the discussion. At 12 months the child perceives an object and reacts to it. Later, the child generates an idea and acts upon the immediate perceptual field accordingly. The child's use of substitute object (e.g. a stick for a doll) is viewed by Vygotsky as a first step in the child's transition from things perceived as objects of action to things perceived as objects of thought. A substitute object (e.g. a stick) acts as a "pivot" that serves to detach meaning (e.g. baby) from a real object (e.g. doll that has already become a substitute for a living baby). For Vygotsky, substitution activities contribute to and reflect cognitive development. The child may initially be hazy about the distinction between real and not real and, in that sense, substitution activities reflect the child's ignorance. In pursuing these activities the child acquires clarity; in fact, the stick doesn't cry.

Psychoanalytic theorists, and others whose work is based on psychoanalytic thinking, also consider the symbolic aspects of pretend play. During its early stages, play symbols represent that which is not comprehended but is deeply felt. In play, the child

expresses wishes associated with the satisfaction and frustration of primary drives and since the child does not have to hide anything, s(he) produces a fairly direct body-analogous interpretation of the environment (Waelder, 1933; Peller, 1954). During later stages, the symbolism becomes less direct and the child's focus shifts from the expression of wishes to more active efforts to cope with overwhelming experiences. Diagnostically, pretend play is viewed as an access route to information about the child's "inner person" (Sears, 1947), his underlying conflicts and anxieties and from there to information about the life experiences which produced them (Sears, 1947; Levin and Wardwell, 1962). As such, it made sense to suggest for example, that aggression in fantasy would be associated with frustration and punishment in the home (Chasdi and Lawrence, 1951). Psychoanalytic formulations have been difficult to study systematically. While pretend play might reflect a child's "real" social and emotional experiences, reality becomes distorted in such a way that the literal content of pretense, whether in the expressions of anger, affection, or joy or in the details of a story and its characters are neither isomorphic with reality nor, taken in isolation from other sources of information, sufficient to determine the nature of the child's latent anxiety (Waelder, 1933; Peller, 1954, Gould, 1972). Therapeutically, pretend play is held to have a cathartic function in so far as it permits troublesome experiences to be expressed and pent up feelings to be vented. At the present time, there is little evidence that catharsis operates according to psychoanalytic formulations (Biblow, 1973).

Developmental Functions. Structural theorists differ with respect to their views of the function served by pretend play. Piaget views

symbolic play as an aberrant phenomena that reflects the child's limitations but does not reduce them. By contrast Vygotsky views pretend play as facilitating the child's construction of a functioning symbol system detached from objects and actions. Other investigators have defined the cognitive benefits of pretend play in somewhat different terms: creativity (Klinger, 1969; Lieberman, 1965), divergent thinking (Sutton-Smith, 1967) or associative fluency (Dansky & Silverman, 1973; 1975).

There is a growing body of evidence that pretend play may have a facilitating influence on several aspects of cognitive development. In one study, increases in spontaneous play behavior were associated with improved performance on a creativity test in which a child was asked to complete unfinished pictures in a way "that no one else will think of" (Feitelson and Ross, 1973). Other investigators have reported a correlational relationship between play and creativity (Wallach and Kogan, 1965; Lieberman, 1965; Bishop and Chace, 1971). In one study, Sutton-Smith (1968) argued that in play the child might increase the range of associations to objects. If in play things are combined with other things for a novel result, then play creates the optimal conditions for the discovery of new relationships. The results indicate that a greater variety of functions were attributed to toys that were more frequently played with. Similar results were reported by Dansky and Silverman (1973) who investigated the associative fluency of children who were permitted to play freely with a group of objects.

What happens when children are given training and practice in thematic-fantasy activities? Saltz and Johnson (1974) report that

training in the play enactment of stories such as The Three Billy Goats Gruff or Little Red Riding Hood and in sociodramatic play increases spontaneous sociodramatic play. More important, children who receive such training were better able to reconstruct a story sequence from a series of pictures. In telling a story from a pictured sequence, fantasy trained children were better able to see causal relations and use inference to connect one picture to another. They also used more connectives and their total verbal output was higher. In a second study, Saltz, Dixon, and Johnson (1977) report an increase in intellectual performance as measured by standard IQ tests and an increased ability to distinguish reality from fantasy.

The distinction between reality and fantasy was addressed specifically in a study reported by Golomb and Cornelius (1977). These investigators argued that in play the child transforms objects and roles while maintaining their original identity and function. The child employs a kind of pseudoreversibility by recognizing both the real identity of the play object and its transformed identity in the play situation. The reversibility expressed in pretend play might be analogous to that required in conservation tasks where the child must mentally transform an object from its altered state to its original one. In the study, the children were encouraged to transform a real object (chair) into a pretend object (truck) and then reverse the transformation. As predicted, the children who participated in these play activities scored higher on conservation tasks than those who did not. A similar effect was reported by Braine and Shanks (1965) who reported improved conservation performance when children were trained to discriminate between two questions, "which looks bigger?" and "Which is really, really bigger?

Training studies show changes in a wide variety of behaviors not customarily associated with strictly cognitive functions. Role enactment training increases the ability of preschool children to understand and identify the affective states of other children (Saltz and Johnson, 1974). When socio-dramatic play is enhanced in a preschool setting, children show improved skill in group problem solving on tasks which require cooperation and role-taking ability. Sociodramatic play helps children see things from another's perspective and understand the needs and preferences of others (Rosen, 1974).

The pattern of effects emerging from the research suggests that pretend play is associated with a large number of particular capacities. A wide variety of training techniques lead to increased play, and particular techniques do not seem to be associated with one or another set of outcomes. Clearly, pretend play has implications for development, but these implications span a broad band of skills and understanding. Vygotsky's notion that pretense touches the development of the symbolic function, rather than specific cognitive skills or knowledge places the issue at a level of generality needed to accommodate the emerging evidence.

On the other hand, children may be achieving more than an internal system of representation that frees them from the control of external stimulation and permits them to think about objects and people. It was Bateson (1956) who, in discussing sociodramatic play, suggested that children may be mastering the concept of role rather than a particular role, or, at an earlier period, the concept of an object category rather that the category of a particular object.

A view similar to the one being suggested here was recently discussed by Fagan (1976) who proposed that the playing organism is building

or modifying an internal model of itself or its environment. When the organism performs symbolic "experiments" it is essentially reorganizing information pertaining to such a model. If so, pretend play may touch two aspects of symbolization - the symbols themselves and the meanings that symbols designate. Pretense, then, may serve two general functions: (a) it may serve to separate meaning from action and object, helping the child acquire a system of signifiers to represent meaning, and (b) it may provide an opportunity to use these signifiers to organize higher levels of meaning.

Functional - Process Issues

An analysis of play in terms of the immediate situation and the variables governing behavior in that situation has emerged relatively recently (Berlyne, 1966, 1970; Weisler and McCall, 1976; Ellis, 1973). Those investigators who have adopted this perspective tend to treat play as a generic term and attempt to place different types of play (e.g. physical play, social play, exploration, manipulative behavior, symbolic play) within a common theoretical framework.

Since Berlyne's theory of specific and diversive exploration provides the major constructs for this framework, we will present his position in some detail (Berlyne, 1966; 1970). Berlyne noted that the two forms of activity differed in the degree to which they are tied to events in the external environment. Specific exploration occurs when the organism is disturbed by a "lack of information and thus left a prey to uncertainty and conflict (Berlyne, 1966:26)." A lack of information occurs when the organism encounters stimulation that is novel, surprising, incongruous,

complex or in other ways too difficult to assimilate easily. Berlyne used the term curiosity to describe the condition of discomfort that motivates specific exploration. By contrast, there are other situations when stimulation in the environment is too easy to assimilate. When events are too predictable and unvarying, organisms will seek out stimulation that affords a more desirable level of variation. Diverse exploration is the term Berlyne used to describe this form of behavior. Specific exploration is stimulus dominated. Whereas diverse exploration is organism dominated.

Berlyne used the concept of "arousal level" to account for the motivational aspects of this behavior. According to Berlyne, there is an optimal level of arousal at which the organism is comfortable. Specific exploration serves to reduce arousal produced by excessive uncertainty whereas diversive exploration increases arousal when it is below the optimum level. Berlyne also suggested that diversive exploration might have "more affinities with autistic or free associative thinking" and that "directed thinking and reasoning must be more closely related to specific exploration." Several investigators have subsequently proposed to view exploration as a behavior aimed at reducing uncertainty and play as a behavior aimed at inducing it (Hutt, in press; Weisler and McCall, 1974).

In the framework provided by Berlyne's theory, play serves a stimulus - seeking function. As developed by Ellis (1974) and Hutt (in press), play serves to keep neural centers alert and active, a function that is of special importance to those organisms that have a long and protected childhood free from stress and survival demands.

Situational Variables. Studies of the conditions under which play occurs are consistent with this analysis. Children tend to play longer with toys that are more novel (Gilmore, 1965; Mendel, 1965), more complex (Moyer and Gilmer, 1955; Gramza, Corush and Ellis, 1972; McCall, 1974; Gramza and Scholtz, 1974)and more manipulable (Gramza, 1976). In a recent study, Switzky, Haywood and Isett (1974) distinguished between exploratory behaviors (visual and tactual investigation) and play behaviors (sensorimotor behaviors such as bouncing or bending an object and symbolic activities such as using an object as if it were a gun). In children between 4 and 7 years of age, exploratory behavior increased with the complexity of the vinyl shapes, but play behavior did not. However, in two year olds, both play and exploratory behavior peaked at moderate levels of complexity and then declined. In older children, for whom pretend capacities are well established, it is not surprising to find play unrelated to stimulus configurations. In a fairly dull situation, older children are likely to create fantasies to alleviate boredom in a manner similar to that described by Singer (1961) when children were asked to wait with nothing to do. By contrast, the younger children have not yet acquired stable representational schemes separated from sensorimotor activities, and their behaviors are still dominated by the characteristics of objects in the immediate environment. It is likely that moderately complex objects are more likely to "look like" real things, the more complex objects resemble abstract shapes and the most complex objects are weird forms. Unfortunately, the category "play" used in the study contained both manipulative and symbolic behavior, so that a developmental account of the above findings is not possible.

Another recent study examined the influence of complexity in a

naturalistic, familiar situation that offered children far more diverse opportunities for doing things. Scholtz and Ellis (1975) observed groups of 4 and 5 year olds in a situation that permitted contact with materials as well as one another. Complexity was varied by introducing apparatus (trestles, blocks, ropes) which differed in the number of playable units. Groups of children played with apparatus at a given level of complexity during 15 sessions over a 3 week period. The results were striking. When apparatus contacts were examined, more object contacts occurred when complexity was high rather than low. When peer contacts were examined, more occurred when the complexity of the apparatus was low. Regardless of complexity level, apparatus contacts declined over sessions as the apparatus became less novel. However, for peer contacts, the trend over sessions was vastly different. Regardless of apparatus complexity, peer contacts <u>increased</u> over sessions, as if peer play provided a richer and more useful source of interest.

<u>Temporal Effects</u>. As every parent knows, children eventually lose interest in a new toy but they do not lose interest in playing. Hutt (1970) investigated children's behavior in a situation which contained a novel, manipulable object surrounded by several other toys. Even when response contingent feedback was available (i.e. when manipulations of the object produced a sound or a visual display)the amount of time children spent manipulating the object decreased over sessions. In contrast, the amount of time children spent in other forms of activity increased. Although Hutt refers to these alternative activities as "play" or "diversive exploration," given the age of the children and descriptions of what they were doing, it is likely that their activities

involved many symbolic components as well as sustained manipulations and combinations of the other available toys (cf Hutt, 1966).

These temporal phases are represented in a model advanced by Nunnally and Lemond (1973) in which heightened attention if followed by specific exploration, uncertainty reduction, play, eventual boredom, and the search for new stimulus encounters (diversive exploration). The evidence reviewed thus far, however, suggests that pretend play may not necessarily terminate in boredom and, to the contrary, might alleviate boredom (Weisler and McCall, 1976; Ellis,1973; Hutt, in press). The problem arises because play is forced to fit a paradigm associated with exploration. The role of familiar toys (the beloved teddy bear or match box cars) and familiar friends is neglected (Scholtz and Ellis, 1975).

Emotional State. Play is most likely to occur when the organism is free from strong biological drives or emotional stress (White, 1959). Even though the clinical literature suggests that the content of play often expresses anxiety and aggression, play is disrupted when the anxiety becomes too great (Erikson, 1950; Peller, 1954; Gould, 1954). Conditions that frustrate the child (Barker, Dembo, & Lewin, 1941), or in the case of the young child, that separate him from his mother in unfamiliar situations interfere with exploratory and manipulative play behavior (Ainsworth & Wittig, 1967).

One study examined the interaction between levels of anxiety and the toys that children prefer (Gilmore, 1965). Gilmore hypothesized that children would rather play with state-relevant toys; that is anxious children (children who were hospitalized) would like toys in keeping with what they were anxious about (such as stethescopes and

thermometers), but non-anxious children (children who were not hospitalized) would like novel toys. Anxious hospitalized children did indeed prefer toys with a medical theme, but all children preferred novel toys.

These and other findings suggest that factors that place children under stress are likely to disrupt or substantially alter play activity. Stress factors in natural settings have not received nearly enough attention, although many of the variables studies by Prescott and Jones (1967), Johnson (1935), and Jersild and Markey (1935) highlight the importance of stress-producing factors such as crowding, inappropriate play equipment, and inadequate supervision.

Some Productive Differences

Structural and functional approaches differ in their stand on three central issues: the nature of definitions, the role of antecedent conditions and the meaning of outcomes. These differences are summarized in Table 2. Although the differences stem from profoundly different world views, matters that are hazy in one approach are clear in another and so the two approaches might complement one another.

Put Table 2 About Here

Definitions. Consider first the definitional issue. Recently, investigators in the functional mode have attempted to define play in relation to exploration focusing on characteristics of the organism's

state such as level of uncertainty, or the relative dominance of stimulus and organism in the production of behavior. In these discussions, pretend play is but one of the varied forms on a continuum fixed firmly by the attributes of specific exploration at one end and diversive exploration on the other.

By contrast, structural theorists define pretend play according to its behavioral characteristics. These characteristics change with age as more mature forms of representational behavior emerge. Implied in the structure analysis is the idea that truly organism dominated behavior involves the capacity to construct and use symbol systems. The study of pretend play can be seen as the study of how the organism achieves this dominance through the acquisition and application of symbolic processes. If in exploration the organism is seeking or receiving new information about the environment, then in pretend play that information is reorganized, interpreted, tagged, and made available for future use. From a general cognitive perspective, exploration and pretend play are complimentary in that they deal with the organism's informational requirements in different ways.

Antecedent Conditions. As indicated in Table 2, these perspectives differ also in their view of the circumstances that promote play. Functional theorists are concerned with the relation between environment and organism in the immediate situation. The problem is one of examining when and how this relation changes. In studies of exploratory behavior, attention focuses on the influence of stimulus parameters - complexity, novelty, discrepancy - that depend upon the state or condition of the organism with respect to stimulus variations. As Weisler and McCall (1976) note,

stimulus parameters assume strikingly different characteristics with respect to pretend play. Some of these can be derived from the issues posed by structural theorists, e.g. the similarity between an object and its referrent. In this example, there is a discrepancy between the conventional meaning of an object and the meaning given to it by the child. The discrepancy is produced by the child, not the environment.

However, stimulus parameters are not a central issue for structural theorists who are more concerned with the influence of experiential factors on play. Studies of socioeconomic differences suggest that children from economically advantaged homes are more likely than those from disadvantaged homes to engage in elaborate sociodramatic games (Feitelson and Ross, 1974; Rosen, 1974). In one study, an experimental procedure was designed to separate two factors that might have contributed to the difference between advantaged and disadvantaged groups. Smilansky (1968) hypothesized that the disadvantaged children might lack either the concepts or knowledge necessary for dramatic reenactment or the techniques for initiating, elaborating, and maintaining "as-if" sequences. In one type of training, teachers emphasized concepts involving roles such as firemen, storekeeper, policeman in an effort to enrich the ideas available to the children. In a second type of training, they taught play techniques by intervening in on-going play sequences. In these interventions, the teacher might suggest a role, an elaboration of a theme, an interaction with another child, or an object substitution. A third group received both theme and technique training and a fourth group received no special remedial attention. Technique and theme-and-technique groups improved, but the most dramatic improvement occurred in the theme-and-technique group. In view of structural notions such as "transformational set", "frame", and "meta communication," it may be that the teacher's behaviors were

influencing the children's appreciation of play as a distinctive and controllable domain of activity and providing the social strategies needed to negotiate play with others. Parent attentiveness, encouragement, and tolerance of play seems to influence a range of characteristics associated with the quality of imaginativeness or creativity (Weisberg and Springer, 1961; Mow and Mow, 1966; Dreyer and Wells, 1966; Bishop and Chace, 1971; Freyberg, 1973). How these parent characteristics operate is not clear but one hypothesis is that they help the child to define play as a special situation for the creation of variation, surprise, nonsense and other forms of stimulation associated with pleasurable arousal (Aldis, 1975). At any rate, there is some evidence that an interacting adult is a crucial ingredient for enhancing the play of preschool children (Singer and Singer, 1974).

Outcomes. Finally, the two perspectives differ in their view of outcomes. Structural theorists are prone to stress the child's acquisition of concepts, skills or general coping strategies. Almost any kind of benefit can be made to fit the structuralist framework and a large number of particular benefits have been demonstrated.

Suppose pretense is viewed as a way of maintaining an optimum level of arousal. On the one hand, the pretending child produces novel, perhaps incongruous arrangements - the stick that cries the peer turned baby - and suppose these induce a moderate, pleasurable level of uncertainty. Of course, occasionally the level becomes too high. For example, group fantasies of aggressive animals and monsters lead to more stimulation (more uncertainty) than the children can manage and play disintegrates (Gould, 1972). On the other, these novel arrangements are inherently

interesting. They present old information in new forms and so become the target of uncertainty reduction efforts. When children play different roles, they are, in a sense, using what they already know. But when they reverse or change roles, old information is used in an unusual way and a new problem is posed. The new problem may encourage the inference that roles have the characteristic of reversibility and substitutability, but the role playing person stays the same. From a developmental perspective, the issue may be conservation of self over varied transformations. Pretend roles might provide "pivots" for the separation of self from others and the shift from an egocentric to a sociocentric perspective (Piaget, 1955). Pleasurable arousal may come from the uncertainty associated with control over these relations and the situations that produce then and arousal reduction from evidence of such control.

Studies of severe environmental deprivation in infancy suggest that infants under 12 months of age, who have limited abilities to produce alternative stimulation, are dependent upon external sources of stimulation but that these abilities expand considerably thereafter. Play cannot be separated from the life circumstances and developmental proficiencies of the organism. The notion that play serves to keep neural and behavior systems active in the absence of immediate stimulation and outcomes that change these systems might be expanded by using two elements:

(a) In order to maintain activity, the organism must be able to generate behavior outcomes that are appropriately stimulating.

(b) Sources of new information are required over time if the organism is to generate outcomes that continue to be stimulating.

Themes for Early Education

Symbolic processes begin to function during the second year of life. They appear in several areas of child behavior and one of these is pretend play. In this chapter, we described changes in children's pretense over the following years. In comparing functional and structural approaches to the study of pretend play, we noted that motivational theorists suffer from an unnecessarily homogenized definition of play. It might be a useful strategy for these theorists to accept pretense as a focal play behavior that fits the construct of organism dominated behavior remarkably well. Not surprisingly, theorists who adopt a structural approach have difficulty specifying the outcomes of play. Current motivational constructs may help to clarify how play "creates the zone of proximal development and how "in play it is as though the child were trying to jump above the level of his normal behavior (Vygotsky, 1967:16)."

If at one time the benefits of play were speculative, recent research has begun to demonstrate as well as define its value. During the thirties and forties early education programs stressed imaginative play activities. In the late sixties, the trend shifted away from play and toward structured activities which if not explicitly academic, were often justified by their presumed contribution to intellectual or verbal growth (cf Fein and Clarke-Stewart, 1973). The "no nonsense" look in early education emphasized planned activities and materials structured to demonstrate physical attributes (e.g., size, form, color, spatial, and topological relationships) and processes related to the organization of attributes (e.g., matching, discriminating, seriating, classifying, attending), often in the hope

of advancing more general features of intellectual competence (e.g. conservation or quantification).

Criticisms of play-oriented early childhood programs reflected specific concerns regarding (a) the stress on an unobtrusive teacher role which may amount to detached (though benign) neglect in the hands of the unskilled or the untalented, (b) individual differences either in the ability of some children to use play effectively or in the needs of others for well-structured activities, and (c) the pervasive lack of clarity regarding the function of play in development. The results of recent research represent the beginnings of a response to these criticisms in that play promoting adult behaviors and strategies for enhancing play have been identified. More important, the benefits of play are being documented and better ways of conceptualizing the issues are emerging. In a sense, symbol acquisition is a structural issue and play is a motivational issue. Although the two can be separated for analytical purposes, theories addressed to a synthesizing framework that enables structural and motivational issues to be joined. Contemporary research may be moving in a direction that will make the construction of such a framework possible.

Table 1

Sequence of Symbolic Levels: Piaget (1962) and Nicholich (197

Prior to Stage VI	Presymbolic Schemes: The child shows understanding of object use or meaning by brief recognitory gestures. No pretending. Properties of present object are the stimulus. Child appears serious rather than playful.
Stage VI	Auto-symbolic Schemes: The child pretends at self-related activities. Pretending Symbolism is directly involved with the child's body. Child appears playful, seems aware of pretending.
Type I A Assimilative Type I B Imitative	Symbolic Schemes I. Symbolic projection A. Child extends symbolic schemes to new objects, actors or receivers of action. B. Child extends imitative schemes to new objects. Pretending at activities of other people or objects such as dogs, trucks, adults, etc.

Adapted from Piaget, 1962 and Nicholich, 1977)

Examples

The child picks up a comb, touches it to his hair, drops it.

The child picks up the telephone receiver, puts it into ritual conversation position, sets it aside.

The child gives the mop a swish on the floor.

The child stimulates drinking from a toy baby bottle.

The child eats from an empty spoon.

The child closes his eyes, pretending to sleep.

A. J. said "cry,cry" to her dog and imitated sound of crying (stage VI). On following days she made her bear, a duck, her hat cry.

B. J. pretended to be telephoning, then made her doll telephone...she telephoned with all sorts of things a leaf instead of a receiver).

Table 1 (cont'd).

	Symbolic Identifaction:
Type II A	A. Identification of one object to another.
Type II B	B. Identification of the child's body with some other person or object; pretending to be other person or object.
Type III	Symbolic Combinations: Combinations with Planned Elements: These are constructed of activities from other levels, but always include some planned element. They tend toward realistic scenes.
Type IV	Collective Symbolism

A. Child picks up play screw-driver, says "toothbrush" and makes the motions of toothbrushing.

B. She crawled into my room on all fours saying "miaow."

III. Child puts play foods in a pot, stirs them. Then says "soup" or "Mommy" before feeding the mother. She waits, then says "more?" offering the spoon to the mother.

IV. Sociodramatic play
Julie finds a dirty popsicle stick and gives it to Teddy "This is your spoon baby." Teddy pretends to eat like a baby.

Table 2

Some Differences Between Structural and Functional Perspectives

	Structural Theories	Functional Theories
Definition	form derived	state derived
Antecedents	life history	immediate situation
Outcomes	acquired concepts or skills	optimum arousal maintenance or control

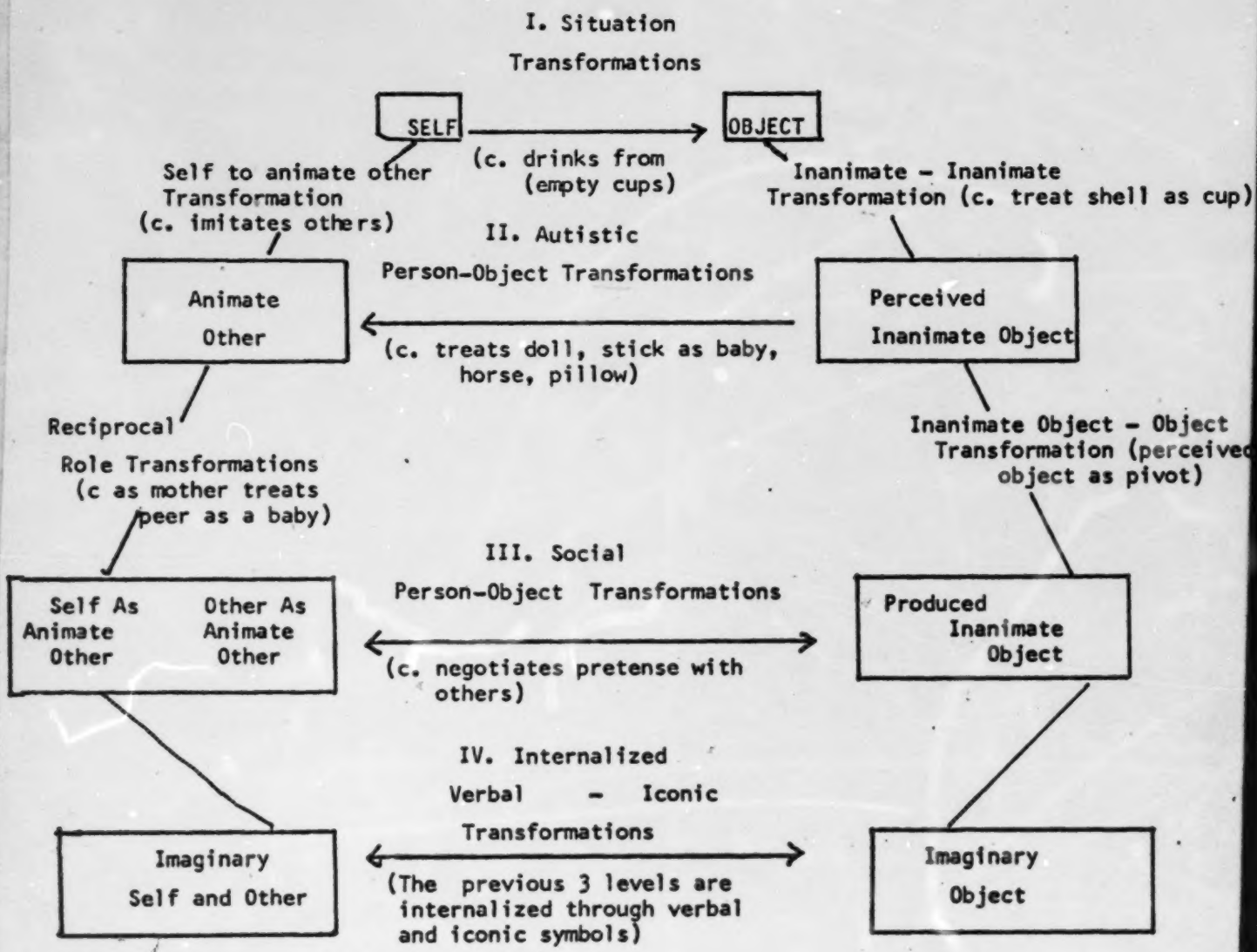

Figure 1. Levels in the acquisition of symbolic transformations.

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